REMARKS

This paper responds to the Office Action dated on June 27, 2005.

Claims 3-9, 11, 12, 14-16, 18-20, 22, 23, 33, and 36 are amended, claims 13, 17, and 21 are canceled. As a result, claims 1-12, 14-16, 18-20, and 22-36 are now pending in this application.

Dependent claims 14, 18, and 21 are amended only to rewrite claims 14, 18, and 21 in independent form. The rewriting of claims 14, 18, and 21 does not alter the scope of claims 14, 18, and 21.

Claim Objections

Claim 12 was objected to due to an informality. Applicant amends claim 12 as suggested by the Office Action. Accordingly, Applicant requests withdrawal of the objection.

§103 Rejection of the Claims

Claims 1-36 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones et al. (U.S. Patent No. 5,534,743; herein after Doan) and further in view of Doan et al. (U.S. Patent No. 5,372,973; herein after Doan).

Claim 1 recites at least one emitter having an "external coating", and an "implanted oxide" layer for releasing electrons at a predetermined energy level, wherein the implanted oxide layer is conforming to an entire surface of the emitter, and wherein the implanted oxide layer is "underneath" a surface of the emitter.

Applicant is unable to find in Jones and Doan, either individual or in combination, all the things recited in claim 1. For example, Applicant is unable to find in Jones and Doan, either individual or in combination, at least one emitter having an "external coating", and an "implanted oxide layer", and wherein the implanted oxide layer is "underneath" a surface of the emitter.

Jones shows an emitter tip such as emitter tip 362 in FIG. 23 or emitter tip 406 in FIG. 24. In Jones's column 15, lines 52-55, Jones mentions that emitter tip 362 may be optionally "coated" with a low work function material layer. Jones shows the optional coated layer as layer

408 in FIG. 24 or layer 409 in FIG. 25. Since optional layer 408 or 409 is coated Jones's emitter tip, Jones names optional layer 408 and 409 as "overlayer" or "overlayer film" (Jones's column 17 line 31, line 38, and line 48). Jones also describes that the low work function materials of the optional "overlayer" 408 or 409 may include materials such as cesium, niobium, and barium (Jones's column 17, lines 38-42).

Doan shows an emitter tip such as emitter tip 13 in FIG. 1 through FIG. 6. Doan mentions that emitter tip 13, if desired, may be optionally be "coated" with a low work function material (Doan's column 6, lines 36-43). Doan describes that the low work function materials of the optional coated layer over tip 13 may include materials such as cesium, niobium, and barium.

The Office Action asserts that it would have been obvious to one of skill in the art at the time the invention was made to include the optional coated layer of Doan on the ion beam deposited oxide layer (overlayer 408 or 409) of Jones. Applicant respectfully disagrees. Both Jones and Doan merely mention that the emitter may be optionally "coated" with a low work function material layer. Both Jones and Doan also mention similar low work function materials for the optional "coated" layer such as cesium, niobium, and barium. Both Jones and Doan teach the same optional layer that coats the emitter tip. Applicant cannot find in Jones and/or Doan any showing or fair suggestion that in addition to the optional coated layer mentioned by Jones and/or Doan, another layer may be formed "underneath" (or "embedded" in) Jones's emitter tip or Doan's emitter tip. For example, Applicant is unable to find in Jones and Doan, either individual or in combination, in addition to the "external coating" as recited in claim 1, an "implanted oxide layer" and wherein the implanted oxide layer is "underneath" a surface of the emitter, as claimed in claim 1. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 1 and its dependent claim 2.

Independent claim 3 recites "at least one emitter having an external coating, and an oxide implantation for releasing electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for lowering a potential barrier to enhance the releasing of electrons, and wherein the oxide implantation is underneath a surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan "at least one emitter having an external coating, and an oxide implantation for releasing electrons at a predetermined energy level, wherein the oxide

implantation is conforming to an entire surface of the emitter for lowering a potential barrier to enhance the releasing of electrons, and wherein the oxide implantation is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 3.

Independent claim 4 recites "at least one emitter having an external coating and an implantation for releasing electrons at a predetermined energy level, wherein the implantation is conforming to an entire surface of the emitter for lowering a potential barrier to enhance the releasing of electrons, wherein the implantation is a layer underneath the surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan "at least one emitter having an external coating and an implantation for releasing electrons at a predetermined energy level, wherein the implantation is conforming to an entire surface of the emitter for lowering a potential barrier to enhance the releasing of electrons, wherein the implantation is a layer underneath the surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 4.

Independent claim 5 recites "at least one emitter having an external coating, and an oxide implantation for emitting electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for affecting a lowering mechanism to enhance the emission of electrons, and wherein the oxide implantation is underneath a surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan "at least one emitter having an external coating, and an oxide implantation for emitting electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for affecting a lowering mechanism to enhance the emission of electrons, and wherein the oxide implantation is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 5.

Independent claim 6 recites "at least one emitter having an external coating an implantation for emitting electrons at a predetermined energy level, wherein the implantation is conforming to an entire surface of the emitter for affecting a lowering mechanism to enhance the emission of electrons, wherein the implantation is a layer underneath the surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in

Jones and/or Doan "at least one emitter having an external coating an implantation for emitting electrons at a predetermined energy level, wherein the implantation is conforming to an entire surface of the emitter for affecting a lowering mechanism to enhance the emission of electrons, wherein the implantation is a layer underneath the surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 6.

Independent claim 7 recites "at least one emitter having an external coating, and an oxide implantation for releasing electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for affecting an image force to enhance the releasing of electrons, and wherein the oxide implantation is underneath a surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan,, "at least one emitter having an external coating, and an oxide implantation for releasing electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for affecting an image force to enhance the releasing of electrons, and wherein the oxide implantation is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 7.

Independent claim 8 recites "at least one emitter having and external coating and an implantation for releasing electrons at a predetermined energy level, wherein the implantation is conforming to an entire surface of the emitter for affecting an image force to enhance the releasing of electrons, wherein the implantation is a layer underneath the surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan, "at least one emitter having and external coating and an implantation for releasing electrons at a predetermined energy level, wherein the implantation is conforming to an entire surface of the emitter for affecting an image force to enhance the releasing of electrons, wherein the implantation is a layer underneath the surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 8.

Independent claim 9 recites "at least one emitter having an external coating, and an oxide implantation for emitting electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for enhancing the Schottky effect to enhance the emission of electrons, and wherein the oxide implantation is underneath a surface

of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan, "at least one emitter having an external coating, and an oxide implantation for emitting electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for enhancing the Schottky effect to enhance the emission of electrons, and wherein the oxide implantation is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 9.

Independent claim 10 recites "at least one emitter having an implantation for emitting electrons at a predetermined energy level, wherein the implantation is conforming to an entire surface of the emitter for enhancing the Schottky effect to enhance the emission of electrons, wherein the implantation is a layer underneath the surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan, "at least one emitter having an implantation for emitting electrons at a predetermined energy level, wherein the implantation is conforming to an entire surface of the emitter for enhancing the Schottky effect to enhance the emission of electrons, wherein the implantation is a layer underneath the surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 10.

Independent claim 11 recites "at least one emitter having an external coating, and an oxide implantation for releasing electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for decreasing a dielectric effect of the emitter to enhance the releasing of electrons, and wherein the oxide implantation is underneath a surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan, "at least one emitter having an external coating, and an oxide implantation for releasing electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for decreasing a dielectric effect of the emitter to enhance the releasing of electrons, and wherein the oxide implantation is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 11.

Independent claim 12 recites "at least one emitter having an implantation for releasing electrons at a predetermined energy level, wherein the implantation is conforming to an entire

surface of the emitter for decreasing a dielectric effect of the emitter to enhance the releasing of electrons, wherein the implantation is a layer underneath the surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan, "at least one emitter having an implantation for releasing electrons at a predetermined energy level, wherein the implantation is conforming to an entire surface of the emitter for decreasing a dielectric effect of the emitter to enhance the releasing of electrons, wherein the implantation is a layer underneath the surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 12.

Independent claim 14 recites "at least one emitter having an external coating, and an oxide implantation layer for releasing electrons at a predetermined energy level, wherein the oxide implantation layer is conforming to an entire surface of the emitter for enhancing the releasing of electrons and for limiting an outgassing to inhibit degradation of the emitter, wherein the oxide implantation layer is embedded in the surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan, "at least one emitter having an external coating, and an oxide implantation layer for releasing electrons at a predetermined energy level, wherein the oxide implantation layer is conforming to an entire surface of the emitter for enhancing the releasing of electrons and for limiting an outgassing to inhibit degradation of the emitter, wherein the oxide implantation layer is embedded in the surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 14.

Independent claim 15 recites "at least one emitter having an external coating, and an oxide implantation layer for releasing electrons at a predetermined energy level, wherein the implantation layer is conforming to an entire surface of the emitter for lowering a potential barrier to enhance the releasing of electrons and for limiting an outgassing to inhibit degradation of the emitter, and wherein the oxide implantation layer is underneath a surface of the emitter". For reasons similar to those discussed above regarding claim 1, Applicant is unable to find in Jones and/or Doan, "at least one emitter having an external coating, and an oxide implantation layer for releasing electrons at a predetermined energy level, wherein the implantation layer is conforming to an entire surface of the emitter for lowering a potential barrier to enhance the releasing of electrons and for limiting an outgassing to inhibit degradation of the emitter, and

wherein the oxide implantation layer is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 15.

Independent claim 16 recites "at least one emitter having an external coating and an implantation layer for releasing electrons at a predetermined energy level, wherein the implantation layer is conforming to an entire surface of the emitter for lowering a potential barrier to enhance the releasing of electrons and for limiting an outgassing to inhibit degradation of the emitter, wherein the implantation layer is embedded under the surface of the emitter". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating and an implantation layer for releasing electrons at a predetermined energy level, wherein the implantation layer is conforming to an entire surface of the emitter for lowering a potential barrier to enhance the releasing of electrons and for limiting an outgassing to inhibit degradation of the emitter, wherein the implantation layer is embedded under the surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 16.

Independent claim 18 recites "at least one emitter having an external coating, and an oxide implantation layer for releasing electrons at a predetermined energy level, wherein the oxide implantation layer is conforming to an entire surface of the emitter for affecting an image force to enhance the releasing of electrons and for limiting an outgassing to inhibit degradation of the emitter, wherein the oxide implantation layer is embedded in the surface of the emitter". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating, and an oxide implantation layer for releasing electrons at a predetermined energy level, wherein the oxide implantation layer is conforming to an entire surface of the emitter for affecting an image force to enhance the releasing of electrons and for limiting an outgassing to inhibit degradation of the emitter, wherein the oxide implantation layer is embedded in the surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 18.

Independent claim 19 recites "at least one emitter having an external coating, and an oxide implantation layer for emitting electrons at a predetermined energy level, wherein the

oxide implantation layer is conforming to an entire surface of the emitter for improving the Schottky effect to enhance the emission of electrons and for limiting an outgassing to inhibit degradation of the emitter, and wherein the oxide implantation layer is underneath a surface of the emitter". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating, and an oxide implantation layer for emitting electrons at a predetermined energy level, wherein the oxide implantation layer is conforming to an entire surface of the emitter for improving the Schottky effect to enhance the emission of electrons and for limiting an outgassing to inhibit degradation of the emitter, and wherein the oxide implantation layer is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 19.

Independent claim 20 recites "at least one emitter having an external coating an implantation layer for emitting electrons at a predetermined energy level, wherein the implantation layer is conforming to an entire surface of the emitter for improving the Schottky effect to enhance the emission of electrons and for limiting an outgassing to inhibit degradation of the emitter, wherein the implantation layer is embedded under the surface of the emitter". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating an implantation layer for emitting electrons at a predetermined energy level, wherein the implantation layer is conforming to an entire surface of the emitter for improving the Schottky effect to enhance the emission of electrons and for limiting an outgassing to inhibit degradation of the emitter, wherein the implantation layer is embedded under the surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 20.

Independent claim 22 recites "at least one emitter having an external coating, and an oxide implantation layer for releasing electrons at a predetermined energy level, wherein the oxide implantation layer is conforming to an entire surface of the emitter for decreasing a dielectric effect of the emitter to enhance the releasing of electrons and for limiting an outgassing to inhibit degradation of the emitter wherein the implantation layer is embedded in the surface of the emitter". For reasons at least similar to the reasons discussed above regarding claim 1,

Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating, and an oxide implantation layer for releasing electrons at a predetermined energy level, wherein the oxide implantation layer is conforming to an entire surface of the emitter for decreasing a dielectric effect of the emitter to enhance the releasing of electrons and for limiting an outgassing to inhibit degradation of the emitter wherein the implantation layer is embedded in the surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 22.

Independent claim 23 recites "at least one emitter having an external coating, and a silicon oxide ion implantation layer conforming to an entire surface of the emitter, and wherein the silicon oxide ion implantation layer is underneath a surface of the emitter". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating, and a silicon oxide ion implantation layer conforming to an entire surface of the emitter, and wherein the silicon oxide ion implantation layer is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 23.

Independent claim 24 recites "at least one emitter having an external coating, and an oxide implantation layer conforming to an entire surface of the emitter for releasing electrons at a predetermined energy level, wherein the oxide implantation layer is underneath a surface of the emitter". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating, and an oxide implantation layer conforming to an entire surface of the emitter for releasing electrons at a predetermined energy level, wherein the oxide implantation layer is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 24.

Independent claim 25 recites "at least one emitter having an external coating, and an embedded silicon oxide layer conforming to an entire surface of the emitter". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating, and an embedded silicon oxide layer conforming to an entire surface of the emitter".

Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 25.

Independent claim 27 recites "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for enhancing the releasing of electrons". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for enhancing the releasing of electrons". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 27.

Independent claim 28 recites "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for lowering a potential barrier to enhance the releasing of electrons". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for lowering a potential barrier to enhance the releasing of electrons". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 28.

Independent claim 29 recites "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for affecting a lowering mechanism to enhance an emission of electrons". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at

least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for affecting a lowering mechanism to enhance an emission of electrons". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 29.

Independent claim 30 recites "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for affecting an image force to enhance the releasing of electrons". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for affecting an image force to enhance the releasing of electrons". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 30.

Independent claim 31 recites "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for improving the Schottky effect to enhance an emission of electrons". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for improving the Schottky effect to enhance an emission of electrons". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 31.

Independent claim 32 recites "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing

to inhibit degradation of the emitter and for decreasing a dielectric effect of the emitter to enhance the releasing of electrons". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating and an embedded oxide layer for releasing electrons at a predetermined energy level, wherein the embedded oxide layer is conforming to an entire surface of the emitter for limiting an outgassing to inhibit degradation of the emitter and for decreasing a dielectric effect of the emitter to enhance the releasing of electrons". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 32.

Independent claim 33 recites "at least one emitter having an external coating, and an oxide implantation for releasing electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for reducing a potential barrier to enhance the releasing of electrons and for inhibiting degradation of the emitter in the presence of the outgassing, and wherein the oxide implantation is underneath a surface of the emitter". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating, and an oxide implantation for releasing electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for reducing a potential barrier to enhance the releasing of electrons and for inhibiting degradation of the emitter in the presence of the outgassing, and wherein the oxide implantation is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 33 and dependent claims 34 and 35.

Independent claim 36 recites "at least one emitter having an external coating, and an oxide implantation for releasing electrons at a predetermined energy level, wherein the oxide implantation is conforming to an entire surface of the emitter for reducing a dielectric effect of the emitter and is stable in the presence of the outgassing, and wherein the oxide implantation is underneath a surface of the emitter". For reasons at least similar to the reasons discussed above regarding claim 1, Applicant is unable to find in Jones and Doan, either individual or in combination, "at least one emitter having an external coating, and an oxide implantation for releasing electrons at a predetermined energy level, wherein the oxide implantation is

conforming to an entire surface of the emitter for reducing a dielectric effect of the emitter and is stable in the presence of the outgassing, and wherein the oxide implantation is underneath a surface of the emitter". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 36.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 373-6969 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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